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Certificate of Analysis



INSPECTORATE

Vessel / Shore Tank : RTC-102 124714 Discharge at Sprague Deepwater Quincy Sample Submitted By : IAC Boston
 Product : ULSDO Analysis Performed By : IAC Boston
 Client Reference : Sprague Ref. # V-14-01744 Date Sampled : 23-Dec-2014
 Terminal / Port / Office: Sprague Deepwater Quincy / Boston, MA Date Reported : 24-Dec-2014
 Job ID : 124714 Submission ID : 064-1400502
 Sample Details : ShoreTank # 8 After Discharge
 Comments :

		# 8 UML Composite	
		064-1400502-01-015	
Method	Test	Result	Specification
ASTM D4052	API Gravity @ 60°F	36.7	30.0 Min.
	Test Temperature	15.0°C (59°F)	
	Density, g/mL	0.8460	
ASTM D93 Proc. A	Manual / Automated	Manual	
	Flash Point, °F / °C	143 / 61.5	130 °F Min.
ASTM D86	Initial Boiling Point, °F	333.3	
	10% Recovered, °F	399.3	
	50% Recovered, °F	507.8	
	90% Recovered, °F	625.6	540 - 640
	Endpoint, °F	672.9	690 Max.
	Recovery, %	98.1	
	Residue, %	1.2	
	Loss, %	0.7	
ASTM D445	Test Temperature	40°C (104°F)	
	Kinematic Viscosity, cSt	2.676	1.9 - 3.4
ASTM D2161	Test Temperature, °F	104	
	Saybolt Universal Seconds, sec	34.9	
ASTM D5773	Cloud Point, °C / °F	-14.0 / 7	
ASTM D5949	Pour Point, °C / °F	-31.0 / -24	
	Testing Interval	1°C	
ASTM D7039	Sulfur Content, ppm (mg/kg)	8.8	
ASTM D2624	Electrical Conductivity, pS/M	280	
	Fuel Temperature, °C	21	
ASTM D6258	Red Dye Concentration, ppm (mg/L) / PTB	0.9 / 0.3	
ASTM D1500	ASTM Color	L1.0	L0.5; L1.0; L1.5; L2.0; L2.5
	Sample Diluted	No	
ASTM D2709	Water and Sediment, % (v/v)	<0.005	
ASTM D7371	Blodiesel, vol %	<1	5 Max.
ASTM D482	Ash Content, mass %	<0.001	0.01 Max.
ASTM D4868	Gross Heat of Combustion, BTU/lb	19813.07	
	Net Heat of Combustion, BTU/lb	18404.99	
	Gross Heat of Combustion, BTU/gal	138473	
	Net Heat of Combustion, BTU/gal	129943	

ASTM D7371 reporting limit is 1.00 volume %. A result reported as "not reportable" or <1 is not equivalent to or equal to zero; however, trace amounts of FAME may be present in the sample which could not be quantified due to method detection limitations.

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For Inspectorate:

Tim Giles, Laboratory Supervisor